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10/064,682	08/06/2002	Scott William Davis	201-0496	7214

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KEVIN G. MIERZWA
ARTZ & ARTZ, P.C.
28333 TELEGRAPH ROAD, SUITE 250
SOUTHFIELD, MI 48034

EXAMINER

WILLIAMS, THOMAS J

ART UNIT PAPER NUMBER

3683

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/064,682
Filing Date: August 06, 2002
Appellant(s): DAVIS, SCOTT WILLIAM

Davis, Scott William
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed Thomas E. Donohue.

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(1) *Real Party in Interest*

A statement identifying the real party in interest is contained in the brief.

(2) *Related Appeals and Interferences*

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

(3) *Status of Claims*

The statement of the status of the claims contained in the brief is correct.

(4) *Status of Amendments After Final*

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) *Summary of Invention*

The summary of invention contained in the brief is correct.

(6) *Issues*

The appellant's statement of the issues in the brief is correct.

(7) *Grouping of Claims*

Appellant's brief includes a statement that claims 1-26 do not stand or fall together and provides reasons as set forth in 37 CFR 1.192(c)(7) and (c)(8).

(8) *Claims Appealed*

The copy of the appealed claims contained in the Appendix to the brief is correct.

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(9) Prior Art of Record

4,295,687	BECKER et al.	10-1981
5,620,236	McGRATH et al.	4-1997

(10) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

- A.) The applicant is not contesting the grounds of rejection for claims 1-10.
- B.) The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 11-26 are rejected under 35 U.S.C. 102(b) as being anticipated by US 5,620,236 to McGrath et al.

Re-claim 11, McGrath et al. discloses a trailer brake controller, comprising: a control element 250 positioned within a passenger vehicle and in communication (via line 251) with a vehicle anti-lock braking system 252; a vehicle speed input from the ABS is provided to the control element, column 19 line 34; a vehicle brake pressure input is provided to the control element from the ABS 252, column 12 lines 15-18 and column 19 line 35 (wherein a brake application, interpreted as a vehicle brake pressure input, is conveyed to the controller); a trailer brake output is generated (see abstract), the trailer brake

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output is controlled by the control element in response to the vehicle speed input and the vehicle brake pressure input, see column 19 lines 26-36.

Re-claims 12 and 13, a diagnostic input from the towed trailer in communication with the control element, the diagnostic input verifies proper operation of the towed vehicle's brake system, see column 16 lines 37-41, wherein McGrath et al. discloses that elements 33 (visual indicators or lamps) provide visual information to the driver regarding the operational condition (i.e. functionality) and information concerning the brake system. It is anticipated that information concerning the brake system means real time information regarding the actual performance of the brake system as well any settings input by the operator.

Re-claim 14, an ABS activation input is in communication with the control element, column 19 lines 17-46.

Re-claims 15-17, lamps 33 act as a display and are interpreted as communication elements that provide communication to the vehicle occupant.

Re-claims 18 and 19, the display includes gain input control, gain display and signal strength, column 4 lines 60-67.

Re-claim 20, McGrath et al. discloses a method of controlling a trailer brake system comprising: determining a vehicle speed and vehicle brake pressure through communication (via line 251) with an anti-lock braking system 252; relaying the speed and pressure information to a control element 250, column 19 lines 33-35; using the speed and pressure information to determine a trailer brake

pressure output signal, column 19 lines 27-32; sending the brake pressure output signal to the trailer braking system.

Re-claim 21, a diagnostic or operational signal is sent to the trailer braking system, lamps 33 provide indication to the vehicle occupant of the diagnostic signal.

Re-claim 22, a display is mounted within the vehicle dash, column 3 lines 29-35.

Re-claims 23 and 25, McGrath discloses that the anti-lock braking system of the towing vehicle communicates with the towed vehicle brake controller and as such the brake signals for the trailer brake output will mimic the ABS brake signals, which will include ramp up signals and step function signals.

Re-claims 24 and 26, the controller of McGrath is equipped with a gain adjustment element, the gain can be adjusted as needed including reasons related to vehicle speed.

(11) *Response to Argument*

Regarding claims 11 and 20, it is the position of the examiner that McGrath does anticipate a vehicle brake pressure input providing vehicle brake pressure from the anti-lock brake system. Firstly, the instant application discloses that acceleration information from the anti-lock brake system can be utilized to determine a brake pressure input, page 5 lines 4-6. McGrath clearly discloses in column 19 lines 34-35 that vehicle deceleration information (which is in fact acceleration information) from the ABS is transmitted to the controller via line 251. It is believed that this describes the situation in the instant

application, and therefore anticipates the claimed limitation. Furthermore, McGrath discloses that a pressure transducer can be used to sense a brake pressure input (as described in US 4,295,687 and incorporated by reference, see column 12 lines 16-18). This is similar to the concept disclosed in the instant application on page 5 lines 9-13. It is the opinion of the examiner that the pressure transducer provided downstream of the master cylinder constitutes part of the anti-lock brake system. Therefore, it is the opinion of the examiner that all limitations set forth in claims 11 and 20 are in fact anticipated by McGrath.

Regarding claims 23 and 25, as stated above it is the opinion of the examiner that any ramp-up or step function brake signals generated by the ABS will be communicated to the controller, and thus converted to a trailer brake output signal. A ramp up pressure increase function is commonly conducted during the initial brake pressure increase phase. After a wheel lock signal is determined the ABS will rapidly decrease brake pressure and institute a step function brake pressure increase phase to a point below a wheel lock condition. This optimizes the maximum brake pressure that the wheel can sustain without locking or slipping. As best understood by the examiner these signals will be transmitted to the controller via line 251, whereupon they will be converted into the trailer brake output signals. As such it is believed that the disclosure of McGrath anticipates the claims 23 and 25.

Regarding claims 24 and 26, the claim language merely requires the controller to have a gain adjustment capability in response to a vehicle speed. McGrath discloses that the controller is provided with a gain adjustment means having both an automatic and




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manual mode. It is the opinion of the examiner that controller will output appropriate trailer brake signals in accordance with current vehicle conditions, one of which is vehicle speed. The vehicle speed value is transmitted to the controller from the ABS unit on board the towing vehicle. As such it is anticipated that the trailer brake signals will be modified by the gain adjustment in accordance with need, including vehicle speed.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

TJW
September 1, 2004

Conferees
JWL 
TJW 
RS 

THOMAS WILLIAMS
PATENT EXAMINER

Thomas Williams
AU 3683
9-1-04

KEVIN G. MIERZWA
ARTZ & ARTZ, P.C.
28333 TELEGRAPH ROAD, SUITE 250
SOUTHFIELD, MI 48034